

Abstract of the Disclosure

Drive belt provided with a continuous band having a radially inwardly oriented surface and a radially outwardly oriented surface, and with an array of plate-like transverse elements engaging the continuous band. The band is curved in a transverse direction at a crowning radius of curvature R_{crown} and provided with an internal residual stress distribution defining a curling radius of curvature R_{curl} at which the band would be curved in longitudinal direction when cut, whereby the continuous band can be bent at a minimum radius of curvature R_{min} in longitudinal direction and whereby the ratio between the curling radius and the minimum radius $R_{\text{curl}}/R_{\text{min}}$ satisfies the equation:

$$R_{\text{curl}}/R_{\text{min}} = (\delta_i + \delta_o) / \delta_o$$

wherein δ_i is the largest perpendicular distance in the radial direction between a neutral line NL in the cross section of the continuous band where the stress due to pure longitudinal bending would be zero and the radially inner most surface of the band and δ_o is the largest perpendicular distance in the radial direction between the neutral line NL and a radially outer most surface of the band.